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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/699,723	10/30/2000	Joel Erwin Goldstein	06076-USA	6932

23543 7590 05/21/2003

AIR PRODUCTS AND CHEMICALS, INC.
PATENT DEPARTMENT
7201 HAMILTON BOULEVARD
ALLENTOWN, PA 181951501

EXAMINER

REDDICK, MARIE L

ART UNIT	PAPER NUMBER
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1713

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DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/699,723

Applicant(s)

GOLDSTEIN ET AL.

Examiner

Judy M. Reddick

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/26/02 & 03/03/03.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. *After further consideration coupled with appellants' persuasive arguments, the rejection based on Pinschmidt, Jr. et al(U.S. 4,360,632) or Wiest et al(U.S. 4,044,197) in combination with appellants' own disclosure per paper no. 7, 09/16/02, paragraph no. 5, is herein withdrawn. New prior art + 112, 2nd paragraph issues have come to the Examiner's attention. Therefore, prosecution on the merits of this application is reopened on claims 1-7 considered unpatentable for the reasons indicated below.*

Claim Rejections - 35 USC § 112

2. *The following is a quotation of the second paragraph of 35 U.S.C. 112:*

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. *Claims 2-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.*

A) *The recited "vinyl acetate based polymer comprises ethylene" per claim 2 constitutes indefinite subject matter as per it not being known, via any rules of chemistry, how the "polymer" can comprise "ethylene" VS "units of ethylene".*

B) *The recited "the glycolic acid adduct of sodium sulfite" per claim 5 constitutes indefinite subject matter as per a) it not being readily ascertainable as to how the recited species further limits the antecedently recited genus and b) the metes and bounds of "glycolic acid adduct of sodium sulfite" engender indeterminacy in scope with the understanding that an "adduct" and a "reaction product" are distinct.*

Claim Rejections - 35 USC § 103

4. *The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:*

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary

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skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. *The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:*

1. *Determining the scope and contents of the prior art.*
2. *Ascertaining the differences between the prior art and the claims at issue.*
3. *Resolving the level of ordinary skill in the pertinent art.*
4. *Considering objective evidence present in the application indicating obviousness or nonobviousness.*

6. *This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).*

7. *Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berghofer et al (U.S. 6,211,400 B1) in combination with Applicants' own disclosure.*

Berghofer et al disclose the use of sulfinic acid derivatives, overlapping in scope with the claimed reducing agent(s), as a cocatalyst in the emulsion polymerization together with peroxide initiators in order to permit the polymerization to be carried out at a lower temperature (col. 4, lines 32-35). Berghofer et al further teach at col. 4 lines 25-27 that the sulfinic acid derivatives are preferentially used in those fields where the evolution of formaldehyde is undesirable. More specifically, Berghofer et al exemplify a process for forming an ethylene/vinyl acetate aqueous polymer emulsion wherein said process involves the use of 2-hydroxy-2-sulfinatoacetic acid, disodium salt (overlapping in scope with the claimed reducing agent), as a reducing agent, in the aqueous emulsion polymerization of vinyl acetate and ethylene (see the Abstract, cols. 1-4 and Run 11 of Berghofer et al).

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The Run 11 of Berghofer et al differs basically from the claimed invention as per the absence of any express teaching directed to the use of "N-methylolacrylamide" in formulating the ethylene/vinyl acetate copolymer. However, vinyl acetate-based polymer emulsions formed by the emulsion polymerization of vinyl acetate and N-methylolacrylamide are well known as impliedly admitted in the Background of the Invention at page 1, lines 20-21 and page 2, lines 1-15 of Applicants' Own Disclosure. Therefore, one having ordinary skill in the art would have found it prima facie obvious to add an N-methylolacrylamide monomer to the polymerization recipe containing the vinyl acetate and ethylene monomers per Run 11 of Berghofer et al and with a reasonable expectation of success and with the understanding that N-methylolacrylamide is a well known crosslinking agent used in emulsion polymerizations of this sort. Criticality for such, commensurate in scope with the claims, not having been demonstrated on this record. Berghofer et al is provided by virtue of 35 USC 102(e).

Response to Arguments

8. *Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.*

Conclusion

9. *The additional prior art listed on the attached FORM PTO 892 is cited as of being illustrative of the general state of the art.*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judy M. Reddick whose telephone number is (703)308-4346. The examiner can normally be reached on Monday-Friday, 6:30 a.m.-3:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703)308-2450. The fax phone numbers for the organization where this application is assigned are (703)872-9310 for regular communications and (703)892-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-8183.

J. M. Reddick
Judy M. Reddick
Primary Examiner
Art Unit 1713

JMR *JMR*
May 19, 2003